

ABSTRACT

A system for doing BLAST with fewer receive antennas or even only one receiving antenna is provided. A system implementation architecture is provided together with a
5 detailed analysis on its principle and theory behind this engineering solution to reduce the MIMO technology cost by using fewer antennas whilst achieving high spectrum efficiency. Examples are provided on how to implement this idea in a CDMA platform and in a OFDM platform. For the CDMA system, the code
10 space is automatically doubled or tripled and therefore a significant system capacity increase is realized. For OFDM systems, the throughput is doubled similar as 2x2 blasting. The system complexity is minimum and full standards backward compatibility can be achieved.